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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,170	12/11/2000	Tracy C. Denk	37359/JFO/B600	5423
23363	7590	12/04/2003	EXAMINER	
CHRISTIE, PARKER & HALE, LLP 350 WEST COLORADO BOULEVARD SUITE 500 PASADENA, CA 91105			MAI, TAN V	
			ART UNIT	PAPER NUMBER
			2124	10
DATE MAILED: 12/04/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/735,170

Applicant(s)

DENK ET AL.

Examiner

Tan V Mai

Art Unit

2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-71 is/are pending in the application.
- 4a) Of the above claim(s) 31-32 & 67-68 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19, 21-29, 33-55, 57-66 and 69-71 is/are rejected.
- 7) ☒ Claim(s) 20, 30 and 56 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7-9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

1. Applicant's election without traverse of Species I, Claims 1-30, 33-66 and 69-71, in Paper No. 11 is acknowledged.

2. Claims 54 and 58-66 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 54, "Claim 57" is mistyped.

As per claim 58, "Claim 21" is mistyped.

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-30 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims recite a method for performing a mathematical function. The claimed invention comprises a plurality of mental steps whereby the claimed mental steps are non-statutory subject matter. Specifically, the claimed method steps can be practiced mentally in conjunction with pen and paper.

However, in order for such a claimed computer-related process to be statutory, the method claims must include either a step that results: (1) in a physical transformation outside the computer, (2) in a limitation to a practical application, or (3) performed specific machine/element(s). Accordingly, claims 1-30 are clearly directed to a non-statutory process.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-14, 19, 21-28, 33-36, 37-50, 55, 57-64, 69-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Juri et al, EP 0 469 841 A, (Applicants' admission Prior Art) or Juri et al '563 (Applicants' admission Prior Art).

As per independent 1, Juri et al disclose, e.g., see Figs. 7-8, the invention substantially as claimed, including: input (21), OR gate (30), AND gate (23) and adder (24). The examiner analyzes the reference as follow: (1) "four least significant bits", see Fig. 7, is considered the claimed "loss portion"; (2) the "fourth" least significant bit value "1", see Fig. 8, is considered the claimed "preselected threshold value  $f_t$ "; (3) the output of AND gate (23) is considered the claimed "selectable bias  $\alpha$ " and (4) the adder (24) combines the "precision portion" with the "selectable bias  $\alpha$ ". Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to design the claimed invention according to Juri et al's teachings because the device is a data round-off device as claimed.

As per claims 2-14, Juri et al do show the equivalent functions, i.e., the output of the OR gate (30) and AND gate (23) provides the equivalent functions.

As per claim 19, Juri et al do show the claimed invention, i.e., the "MSB" (see Fig. 8).

Due to the similarity of claim 21-28 to claims 1-14, they are rejected under a similar rationale.

As per claims 33-36, the claims recite hardware for performing the method claims. Juri et al (Fig. 7) do show the hardware.

As per claims 37-50, 55, 57-64, and 69-71, the claims recite "software code" for performing the method/apparatus claims 1-14, 19, 21-28, 33-36. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to write "software code" according to Juri et al's teachings because the device is a data round-off device as claimed.

7. Claims 15-18, 29, 51-54 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Juri et al as applied to claim 1-14, 19, 21-28, 37-50, 55, and 57-64, above, and further in view of Morrow (Applicants' admission Prior Art).

As per claims 15-18, 29, 51-54 and 65, the claims add the "predefined relationship" features. Morrow does disclose a a method/apparatus for rounding using "**previous rounding history**". Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Morrow

**"previous rounding history"** features in Juri et al, thereby making the claimed invention, because the proposed device is a data round-off device as claimed.

*mm* ~~TTTTTT~~8. Claims 20, 30, 56 and 66 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cited references are art of interest.

10. The following is an examiner's statement of reasons for allowance: the recorded references do NOT teach or suggest the novel "selected pseudorandom sequence of data bits" feature I round-off device as recited in dependent claims 20, 30, 56 and 66.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan V. Mai whose telephone number is (703) 305-9761. The examiner can normally be reached on Tue-Fri from 6:30am to 5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki, can be reached on (703) 305-9662. The fax phone numbers for the organization where this application or proceeding is assigned are:

After-final	(703) 746-7238
Official	(703) 746-7239
Non-Official/Draft	(703) 746-7240.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



TAN V. MAI  
PRIMARY EXAMINER